

Application No.: 10/727,916  
Final Office Action Dated: October 20, 2005  
Response to Final Office Action Dated: November 29, 2005

REMARKS

Claims 6, 7 and 17-21 are pending and remain for consideration. Claims 6, 17 and 21 are amended herein.

Claims 6, 7 and 17-21 are rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by Meier (U.S. Pat. No. 5,977,511). The rejection is traversed and reconsideration is respectfully requested, particularly in view of the clarifying amendments to the claims.

Claims 6, 17 and 21 are amended to clarify that the dominant edge is determined so as to incur generally the smallest possible amount of machining for the non-dominant edge (see specification of published application at paragraph [0011]).

Meier is directed to a process and device for butt welding sheets by laser to form compound sheets. The device, for example, butt welds a first sheet to a second sheet by a laser. Each sheet has an edge to be welded and a thickness defined between a first surface and an oppositely disposed second surface. The sheets also define a gap having a width when the edges of the sheets to be welded are positioned in an abutting relationship. The device comprises a holding system which fixes the sheets with their edges to be welded held in contact with one another. A deformation system is provided to plastically deform at least one of the sheets prior to welding and ahead of the laser by reducing the thickness of the sheet between the first and second surfaces and causing material of the sheet to flow laterally toward the gap as the sheets are welded. The deformation force is exerted on one or both sheets by optically or mechanically detecting the width of the gap ahead of the deformation zone and increasing or reducing the deformation force accordingly.

Meier, however, does not teach or suggest detecting an edge line of each sheet in order to identify one of the detected edges as the dominant edge, as is generally recited in independent claims 6, 17 and 21 of the present application. Moreover,

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Meier does not mention identifying sheet edges as dominant or non-dominant such that the non-dominant edge is selected to be machined or reworked, and wherein the dominant edge is determined so as to incur generally the smallest possible amount of machining for the non-dominant edge (see claims 6, 17 and 21; and specification of published application at paragraph [0011]). Further, Meier is silent on providing a discard unit for discarding a metal sheet from the apparatus prior to welding (see claims 7, 19 and 21).

The Examiner believes that by giving the claims their broadest reasonable interpretation, Meier teaches detecting the dominant edge of the gap as claimed in the present application. Applicants respectfully disagree with the Examiner. Meier is silent as to how the device selects an edge to be machined. There is no teaching or suggestion that the device of Meier is configured to select an edge to be machined in order to incur generally the smallest possible amount of machining for such edge. In other words, the device of Meier does not distinguish between machining a dominant edge or non-dominant edge. Rather, the device of Meier is configured to determine the width of the gap at any particular point along joined sheets and to thereupon reduce the width to be within an acceptable amount. Determining the width of the gap at any particular point along joined sheets does not inherently involve distinguishing one edge as dominant and another edge as non-dominant in order to minimize machining of one of the edges. This is not surprising since Meier teaches that both edges can be plastically deformed prior to welding (see col. 2, lines 32-36).

For an anticipation rejection to be appropriate, each and every element or limitation in a rejected claim must be disclosed in a single prior art reference used in the claim rejection. Because Meier does not teach or suggest an apparatus for welding metal sheets including a device for detecting an edge line of each sheet to be welded, and does not teach or suggest a control unit for identifying one of the edges to be welded as the dominant edge and a unit for machining the non-dominant edge, wherein the dominant edge is determined so as to incur generally the smallest:

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possible amount of machining for the non-dominant edge, it cannot be maintained that Meier anticipates independent claims 6, 17 and 21. Moreover, because claims 7 and 18-20 each depend from and thereby incorporate the limitations of one of independent claims 6 and 17, these dependent claims are not anticipated for at least the reasons set forth for the independent claims.

In view of the foregoing, it is respectfully submitted that claims 6, 7 and 17-21 are in condition for allowance. All issues raised by the Examiner having been addressed, an early action to that effect is earnestly solicited.

No fees or deficiencies in fees are believed to be owed. However, authorization is hereby given to charge our Deposit Account No. 13-0235 in the event any such fees are owed.

Respectfully submitted,

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